Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Digital Audio Broadcasting Systems	)	MM Docket No. 99-325
And Their Impact On the Terrestrial Radio	)	
Broadcast Service	)	RM-9395
	)	
	)	
	)	

Comments of the National Association of Broadcasters

I. INTRODUCTION

The National Association of Broadcasters ("NAB")[1] submits these comments in the above-captioned proceeding. On November 1, 1999, the Commission released its *Notice of Proposed Rule Making* ("*Notice*") asking for comment on the development and implementation of digital audio broadcasting ("DAB") for the American radio broadcast service. The Commission notes that the "catalyst for this action is the progress of in-band, on-channel ("IBOC") DAB technology, which IBOC system proponents assert is in the final stage of development." *Notice* at ¶ 1. While the Commission seeks comment on alternative approaches for DAB in the U.S., NAB believes the Commission should focus its attention on IBOC DAB as

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[1] NAB is a nonprofit, incorporated association of television and radio stations and networks, which serves and represents the American broadcasting industry.

the appropriate model for DAB. The transition to digital for terrestrial radio broadcasters must be made a priority as they face the advent of satellite digital radio service in the near term.

In the *Notice*, the Commission outlines its public policy objectives and proposes evaluative criteria for DAB models and systems. NAB generally agrees that the Commission has appropriately chosen these objectives and criteria, and believes that they point towards an IBOC DAB model as opposed to any alternative spectrum models.

II. IBOC DAB IS THE MOST REALISTIC MODEL FOR TERRESTRIAL BROADCASTERS TO ACHIEVE THE COMMISSION'S POLICY GOALS FOR DAB

The Commission has outlined ten evaluative criteria to be used to determine the DAB system that would best promote the public interest. *Notice* at ¶ 20. Generally, NAB believes that the Commission has outlined the proper criteria for evaluation, in that they take into account all of the relevant issues facing DAB implementation and pave the way for IBOC DAB once a system transmission standard is chosen.

For example, one of the threshold and most important criteria that the Commission expresses is its desire to evaluate DAB systems for enhanced audio quality and robustness – CD quality for digital FM broadcasts and FM quality for digital AM broadcasts. *Notice* at ¶ 21. The IBOC DAB proponents assert that enhancements at that level are provided by their systems. Additionally, the National Radio Systems Committee ("NRSC") is in the process of evaluating test data submitted by one of the two current IBOC DAB system proponents that is intended to bear out whether such improvements exist with the proponent's IBOC DAB system. The Commission should receive the NRSC's report on this proponent at the end of the first quarter of 2000. The other current proponent has indicated it will also submit test data on its system in late January and the NRSC will prepare a similar report for their system.

The possibility that IBOC DAB systems may have reduced digital performance in a hybrid, transition mode should not impose a black mark on an IBOC DAB system scorecard. As the Commission notes, there may be some trade-offs necessary. The Commission notes that both Lucent Digital Radio, Inc. ("LDR") and USA Digital Radio, Inc. ("USADR") believe that their systems will deliver enhanced audio quality even in hybrid mode. *See Notice* at ¶ 21. Even if the hybrid mode performance is less robust than an all-digital mode, the Commission must remember that an alternative spectrum model using TV channel 6 would not even allow broadcasters to begin a transition to digital until the latter part of this decade. Any tradeoff in quality from hybrid operation of an IBOC DAB system would be greatly offset by the delayed time frame in which alternative spectrum would even allow for digital transmissions to begin. IBOC DAB proponents want to begin service as soon as possible. If the hybrid IBOC DAB system provides enhanced audio quality above and beyond existing analog quality, an IBOC DAB system is preferable over an alternative spectrum model in this regard.

Additionally, NAB believes that an IBOC DAB system would provide the public and existing broadcasters with the quickest transition due to the greater incentives to make a transition to DAB. IBOC DAB systems would allow broadcasters to use existing infrastructure to make the transition and would result in less overall cost.

NAB also agrees with the Commission's tentative conclusion that each existing broadcaster must be provided the opportunity to transition to digital (*Notice* at ¶ 32) because – as the Commission has stated – they are best suited to provide such service to the public. *Notice* at ¶ 16. The goal of the transition to digital is to provide the public with the full benefits of digital transmissions and the resulting auxiliary services. Broadcasters have the incentive and ability to provide digital service through an IBOC DAB model.

NAB again asserts that any IBOC DAB service must be compatible with analog transmissions and not cause impairment to analog listeners. However, at this point in time, NAB believes that it is not necessary to evaluate all-digital compatibility with analog signals. *See Notice* at ¶ 24. It is premature to address this issue because the Commission has not adopted a system, nor has an IBOC DAB system been fully tested and evaluated. Thus, it would be premature to address these issues until more information is known about each of the IBOC DAB systems currently in development.

The Commission has not limited itself to only considering an IBOC DAB model and it has expressly denied that the instant proceeding is an IBOC-only rulemaking. *Notice* at ¶ 19 . However, it noted several times that the suggested DAB models within the *Notice* are not necessarily mutually exclusive. At this time, comparing the different models (*i.e.,* IBOC DAB and alternative spectrum) is not as necessary as evaluating an IBOC DAB system using the outlined criteria. NAB believes that an IBOC DAB system would prove to best promote the Commission's public policy objectives. More importantly, NAB believes IBOC DAB will be able to achieve the Commission's goals more quickly than any other alternative spectrum approaches due to the remarkable advances reported by IBOC DAB proponents in the last few years.

III. THE ALTERNATIVE SPECTRUM MODEL IS FLAWED

Within the *Notice* the Commission has carefully crafted its language so as not to identify IBOC DAB as the only potentially appropriate model for the introduction of DAB service for terrestrial broadcasting. However, although the Commission has explicitly stated that the *Notice* "should not be construed as the start of an IBOC rulemaking," (*Notice* at ¶ 19), its choice of evaluative criteria and the suggested alternative spectrum model strongly indicated that an

alternative spectrum model for DAB is unrealistic and should not be seriously considered when IBOC DAB systems "hold great promise." *Notice* at ¶ 19. The Commission should focus its energy on the comprehensive testing of IBOC DAB before looking to alternative spectrum approaches.

Disregarding the fact that the Commission stated as one of its DAB policy goals that it prefers a DAB system that uses the least amount of spectrum, it has nonetheless suggested an alternative that results in the need to reallocate 6 MHz of spectrum for terrestrial DAB. Further, the only alternative spectrum the Commission suggested in the *Notice* was the use of TV channel 6 for DAB once the transition to DTV is completed. The Commission itself notes that this spectrum – at the earliest – would be available in 2007.[2] However, TV Channel 6 is included in the DTV "core spectrum" (channels 2 –51) and many existing broadcasters operating on channel 6 in analog NTSC are expecting to switch their DTV operation to channel 6 when the analog service is terminated. It is not clear that DTV service could be squeezed into a smaller core spectrum area, given that 108 MHz of television spectrum, representing more than 25% of the VHF/UHF television band, will already be returned to the government at the conclusion of the DTV transition. Thus, at this time the Commission cannot assume that reallocation of TV Channel 6 to the radio service is feasible.

Additionally, although the Commission suggests that the alternative spectrum model would eliminate potential concerns regarding audio fidelity in a hybrid IBOC mode, the fact that the spectrum likely is not available for at least another decade makes the suggestion unrealistic. Furthermore, as noted by the Commission, the alternative spectrum model poses a larger

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[2] It is also not likely that the Commission's goal of providing a digital outlet for all existing radio stations could be accommodated in one 6 MHz band.

disruption threat to listeners. *Notice* at ¶ 43. It also would require the Commission to develop a transition plan akin to that now in place for DTV. Such a process is time consuming and poses many difficulties – such as achieving consensus on channels, maintaining service areas, and avoiding interference.

The Commission has stated that the development and implementation of terrestrial DAB is in the public interest (*Notice* at ¶ 15) and it seeks to foster a rapid non-disruptive transition for broadcasters and listeners. *Notice* at ¶ 18. Assuming IBOC DAB systems fare well through testing and evaluation, NAB believes that the appropriate way to achieve these goals is through the implementation of IBOC DAB. Although the Commission notes that alternative spectrum models and IBOC DAB models need not be mutually exclusive (*Notice* at ¶ 41), the Commission should not impede the transition to digital by waiting for spectrum to come available. Two IBOC DAB proponents believe they are on the threshold of having viable systems that could begin the digital revolution for terrestrial radio broadcasters in the next few years. Only if IBOC DAB proves not to be viable should the Commission look to using other spectrum for DAB.

IV. THE COMMISSION HAS FAILED TO CONSIDER THE IMPACT OF LPFM ON IBOC

On January 20, 2000, the Commission adopted a *Report and Order* that institutes a new low power FM ("LPFM") service. The Commission took this action without having any substantive evidence in the record regarding how such a service would impact the development and the implementation of IBOC DAB, even though it specifically asked these questions in both proceedings. In the instant *Notice*, the Commission seeks comment on the compatibility of IBOC and LPFM. *Notice* at ¶ 25.

Specifically, the Commission asked how an IBOC "DAB system could be designed to protect a possible future LPFM service" and about the "potential for enhancing the robustness of

IBOC systems to reject undesired 2nd and 3rd adjacent channel signals, and the likely impact of such modification." *Notice* at ¶ 25. These are substantive and important questions that needed to be addressed by the IBOC DAB proponents before any LPFM service was adopted. Unfortunately, the Commission chose to rely on assumptions instead of waiting for the facts.

NAB submitted Further Comments in the LPFM proceeding that stressed these points. *See Further Comments of NAB* in MM Docket No. 99-25, filed January 5, 2000. If the Commission were seriously concerned about the development of IBOC DAB and the impact it faces from any LPFM service – whether located on second- or third-adjacent channels – the Commission should have waited for the development of the technical record in this proceeding before it moved forward with any LPFM service.

V. THE COMMISSION SHOULD LOOK TO THE NATIONAL RADIO SYSTEMS COMMITTEE ("NRSC") AS THE STANDARD SETTING AND TESTING PROCESS BEGINS FOR IBOC DAB

A. The NRSC continues to facilitate the testing of IBOC DAB systems.

NAB outlined the system testing and system evaluation process the NRSC was working towards in 1999 in comments filed on USADR's *Petition for Rule Making* ("*Petition*"). *See Comments of NAB* in RM-9395, filed December 23, 1998. In those comments, NAB expressed support of the NRSC process as a way to lead to industry consensus. In the year since comments were first sought on the *Petition* to begin a rule making on IBOC DAB, the NRSC has headed down its projected course by adopting test guidelines and evaluative guidelines as IBOC DAB proponents have continued their laboratory testing and begun field testing their systems.

At this point, the NRSC is evaluating data from one IBOC DAB proponent – USADR – and is expected to issue a report containing its findings by the end of the first quarter of 2000.

Test data from LDR is expected in January 2000. Further, the NRSC is poised to begin standard setting procedures once a viable IBOC DAB system is shown.[3]

As the Commission noted, it believes that "it is necessary and appropriate to rely to some degree on the expertise of the private sector for DAB system evaluations and, ultimately, recommendations for a transmission standard." *Notice* at ¶ 58. NAB agrees, and suggests, that the Commission should continue to rely on the NRSC process as an important contributing element to achieve rapid introduction of IBOC DAB service to the American public.

B. Ultimately, the Commission must choose a single standard to bring IBOC DAB to American consumers.

The Commission has tentatively concluded in the *Notice* that it and all sectors of the industry must play a role in the development of standards, but it failed to conclude that it must choose a single DAB transmission standard. *Notice* at ¶ 52. In order to ensure that consumers will be served by the new technology as quickly as possible, broadcasters must be given an incentive to transition to IBOC DAB. Adoption of a single standard for FM IBOC DAB and AM IBOC DAB may ameliorate many concerns and issues for consumers, manufacturers and broadcasters.

Additionally, incentive to transition lies in the continuation of coordinating among the several parties – a process that has been ongoing through the NRSC for the last several years. The NRSC has the expertise and ability to assist the Commission in this process. NAB believes that the NRSC process will provide the Commission with all the relevant information and

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[3] NAB and the Consumer Electronics Association ("CEA") have submitted materials to the Commission in this docket on behalf of the NRSC. The materials include the field test guidelines and evaluative guidelines adopted by the NRSC in 1999, as well as the most recent action taken by the NRSC concerning the NRSC's intent to pursue standard setting.

evidence from which the Commission can make a final decision to adopt a single IBOC DAB transmission standard.

VI. CONCLUSION

NAB believes the time is near for terrestrial radio broadcasters to join the other media that have begun the transition to digital transmission. The Commission must make this a priority as radio broadcasters are facing the advent of satellite digital radio service. NAB believes the most appropriate means to this digital goal is through deployment of an agreed upon IBOC DAB standard. The Commission should take all steps necessary to facilitate setting a single IBOC DAB standard as quickly as possible.

Respectfully Submitted,

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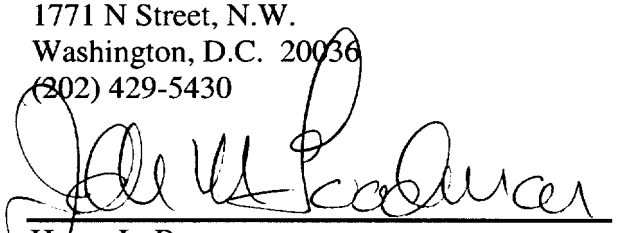

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